Retrograde Spiral Enteroscopy Using the Fujinon EN-450T5 and Olympus SIF-180 200cm enteroscopes with the Discovery SB Over-tube

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Abstract

Introduction: Recent advances in small bowel visualization have increased the demand for small bowel enteroscopy. Although rapid and deep, small bowel anterograde spiral enteroscopy is not usually able to visualize the entire small bowel. Retrograde small bowel enteroscopy is indicated in up to 40% of patients undergoing anterograde enteroscopy. Our aim was to evaluate the use of the new slim 200cm enteroscopes with the Discovery SB for per anal retrograde enteroscopy.

Patients, Materials and Methods: 21 patients were consecutively enrolled in a non-randomized, non-controlled pilot study. Study aims were to evaluate time parameters, small bowel intubation success rates, maximum depth of insertion and whether spiral enteroscopy could be initiated. Spiral enteroscopy was defined as advancement in the ileum with rotation of the Discovery SB over-tube. The Discovery SB is 118 cm long with a 5.5 mm raised hollow spiral 21 cm long and a locking device on the proximal end that allows the over-tube to be fixed to the enteroscope while allowing rotation of the Discovery SB. The enteroscopes used were the 200cm 9.4mm Fujinon EN-450T5 and the 9.2 Olympus SIF-180. Both enteroscopes have a 2.8mm working channel. Depth of insertion was measured by visual criteria.

Findings: Average age was 46 years (range 30-64); 21 patients were enrolled; sex distribution was 8 M/13 F. Primary indications were 8 patients with anemia and 13 with chronic diarrhea and abdominal pain. Average time to cecum was 8.3 min. (range 3-15); Average time to maximum small bowel insertion was 27.5 min. (range 18-41); Average total procedure time was 34.7 min. (22-45); Average maximum depth of insertion into the ileum was 136cm (range 50-250cm). Small bowel intubation was successful in all patients. Spiral enteroscopy was achieved in 42% of patients (9/21). Maximum depth of insertion when spiral enteroscopy was achieved was 170cm (range 100-250cm). Without spiral enteroscopy engagement the average depth of insertion in the small bowel was 88cm (range 50-170cm). Findings were one avm, one tumor, and four small bowel ulcers.

Conclusion: Retrograde small bowel enteroscopy is safe and effective using the 200cm Olympus SIF-180 and Fujinon EN-450T5 enteroscopes with the Discovery SB over-tube. Spiral enteroscopy was initiated in 42% of patients. When spiral enteroscopy was initiated depths of small bowel intubation were superior. Times of procedure and depths of procedure compare favorably with other techniques for retrograde enteroscopy. Spiral enteroscopy is a viable option when retrograde enteroscopy is indicated.

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